

PICKUP TAILGATE LOADING RAMP

CROSS REFERENCE TO RELATED APPLICATIONS

Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED
RESEARCH OR DEVELOPMENT

Not applicable.

1 BACKGROUND OF THE INVENTION

2 This present invention relates to loading ramps and more
3 particularly combination pickup truck tailgate and loading
4 ramp.

5 1. Field of the Invention

6 2. Description of the Prior Art

7 When loading articles of considerable mass into a pickup
8 bed it has been common practice to lower the pickup tailgate
9 and provide a temporary ramp, particularly if the article to
10 be loaded is equipped with wheels such as riding lawn mowers
11 or golf carts, in which the temporary ramp consists of lengths
12 of lumber, such as 2 by 8 or 2 by 12, extending from the
13 rearward edge of the pickup tailgate to the surface of the
14 earth. Additionally, ramp ends or ramp feet which are at-
15 tached to the respective ends of such temporary lumber ramps
16 are commercially available to form a smooth transition from
17 the surface of the earth and the upper end portion of the
18 temporary ramp and the horizontal surface of the tailgate.

19 This invention is distinctive over such ramps for pickup
20 trucks by providing one end of the ramp of this invention to

1 serve as a pickup tailgate and including pairs of rigidly
2 connected track forming frames extending from the tailgate
3 position to the surface of the earth in which these frames are
4 hinged intermediate their ends and provided with a gravity
5 positioned support.

6 BRIEF SUMMARY OF THE INVENTION

7 A rectangular frame having overall dimensions substan-
8 tially equal with the perimeter dimensions of the standard
9 tailgate for the pickup truck to be equipped with a loading
10 ramp is provided with hinge and latch mounting members secur-
11 ing the rectangular main frame to the pickup bed for vertical
12 movement about a horizontal axis in opening and closing the
13 tailgate portion. Additionally two pairs of elongated rectan-
14 gular frames cooperatively hinged together are rigidly con-
15 nected at one end in laterally spaced relation to the top edge
16 surface forming the rectangular main frame with the other ends
17 of the pairs of hinged frames resting on the surface of the
18 earth and supported at their hinged position by a gravity
19 positioned U-shaped frame pivotally depending from the hinge
20 position of the track forming frames. Each of the main frame
21 and hinged rectangular frames are transversely provided with a
22 plurality of equally spaced apart right angle cross members
23 forming an open frame work for supporting the wheels of vehi-
24 cles being moved up or down the ramp from the surface of the
25 earth to the bed of the pickup or vice versa. When not in use
26 as a ramp the main frame forms the tailgate of a pickup bed

1 and the remaining portion of the ramp is disposed upright
2 adjacent the vertical plane of the tailgate for ease in lower-
3 ing the ramp to a loading or unloading position by simply
4 lowering the tailgate and extending the hinged frames
5 rearwardly to the surface of the earth.

6 The principal object of this invention is to provide a
7 pickup loading ramp having a tailgate portion, which remains
8 connected with the pickup at all times and is easily moved
9 from a pickup bed closed position to a pickup bed ramp loading
10 or unloading position for wheel equipped vehicles.

11 BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

12 Figure 1 is a perspective view of the loading ramp in
13 operative position on a pickup truck, the truck chassis being
14 omitted for clarity;

15 Figure 2 is a rearward elevational view of the loading
16 ramp when folded to pickup tailgate closed position, of the
17 pickup cab omitted for clarity;

18 Figure 3 is a top plan view of the loading ramp, per se;

19 Figure 4 is a fragmentary vertical cross sectional view,
20 to a different scale, taken substantially along the line 4---4
21 of Fig. 3;

22 Figure 5 is a perspective view of the loading ramp in
23 operative position when viewed from one side;

24 Figure 6 is a fragmentary side elevational view of the
25 loading ramp when folded to tailgate closed position;

26 Figure 7 is a top plan view of a modified ramp for load-

1 ing and unloading three wheel vehicles;

2 Figure 8 is a top plan view of loading ramp track sec-
3 tions forming the alternative embodiment of Fig. 7; and,

4 Figure 9 is an elevational view of the hinged track
5 support.

6 DETAILED DESCRIPTION OF THE INVENTION

7 Referring first to Figs. 1 and 3, the reference numeral
8 10 indicates a generally rectangular frame in overall configu-
9 ration lying in a common plane, forming a ramp, pivotally
10 connected at one end with the tailgate position of a conven-
11 tional pickup truck 12.

12 The ramp 10 includes a rectangular tailgate portion 14
13 having overall dimensions substantially equal with the overall
14 dimensions of a tailgate of the pickup truck 10. The tailgate
15 section 14 comprises a base rail 16 connected, in parallel
16 relation, with a top rail 18 both formed from tubing material
17 and interconnected by a pair of tubular end rails 20 and 22.
18 A pair of hinge members 24 cooperating with the tailgate
19 hinges, not shown, project outwardly from respective end
20 portions of the base rail 16 at its juncture with the end
21 rails 20 and 22, respectively. Respective end portions of the
22 top rail support a pair of latches 26 for securing the tail-
23 gate 14 in closed position.

24 The ramp 10 further includes a pair of elongated ramp
25 tracks 28 and 30 rigidly connected at one end in laterally
26 spaced relation with the top rail 18 of the gate section 14.

1 Since the ramp forming tracks 28 and 30 are identical, only
2 the track 28 is described, in detail in the interest of brev-
3 ity.

4 The track 28 comprises a pair of U-shaped frame members
5 32 and 34 having leg end portions 35-36 and 38-39 respectively
6 disposed in confronting relation and pivotally connected with
7 one flange of a pair of right angle hinge forming members 42
8 and 43 for vertical pivoting movement of the U-shape member 34
9 toward and away from the underside of the other U-shaped
10 member 32, as viewed in Fig. 3. The bight portion 44 of the
11 U-shaped member 32 is rigidly secured longitudinally to one
12 end portion of the tailgate top rail 18 in spaced relation
13 with respect to the other track 30. The bight portion 46 of
14 the U-shaped member 34 is normally supported by the surface of
15 the earth 47 (Fig. 5).

16 A track support member 50 (Fig. 9) comprising a U-shaped
17 member having a tubular bight portion 51 and upstanding angu-
18 lar metal legs 52 and 54 pivotally connected with the hinge
19 forming members 42 and 43 between the confronting ends of the
20 legs of the U-shaped members 32 and 34. The track support 50
21 is normally vertically disposed, by gravity, and contacts the
22 surface of the earth 47 below the respective track 28 and 30
23 when the loading ramp 10 is disposed in loading position (Fig.
24 5).

25 The track 28 further includes a plurality of transverse
26 cross members 56 extending between the legs of the U-shaped

1 members 32 and 34 in longitudinal equally spaced relation.
2 Each of the cross members 56 comprise a length of rigid right
3 angle metal disposed with the edges of the angular flanges
4 directed upwardly as viewed in Fig. 4 for increased frictional
5 resistance against the wheels of vehicles moving up or down
6 the plane of the ramp during the loading or unloading move-
7 ment. Similarly, the tailgate section 14 is provided with a
8 plurality of longitudinally cross members 58 extending between
9 the end rails 20 and 22 and are identical in transverse cross
10 section with the track cross members 56. A plurality of brace
11 members 59 extend between the tailgate bottom rail 16 and top
12 rail 18 for rigidity.

13 OPERATION

14 In operation of the embodiment 10, assuming the factory
15 equipped tailgate of the truck 12 has been removed, the tail-
16 gate section hinge members 24 are cooperatively received by
17 the hinge members of the tailgate, not shown, on the pickup
18 truck bed. The latches 26 secure the tailgate section 14 when
19 in closed position to the pickup bed side walls. When not in
20 use the ramp track members 28 and 30 are disposed in the
21 position illustrated by Fig. 6 with the U-shaped members 34
22 depending from the hinge members 42 and 43 and the track
23 support members 50 interposed between the U-shaped frames 32
24 and 34.

25 When it is desired to utilize the track for loading and
26 unloading a wheeled vehicle, not shown, the tailgate latches

1 26 are released and the ramp 10 is pivoted downwardly and
2 rearwardly about the horizontal axis of the tailgate hinge
3 members 24 until the bight portion 46 of the U-shaped member
4 34 rests on the surface of the earth 47 and gravity disposes
5 the track support 50 in a vertical position (Fig. 5). There-
6 after a wheeled vehicle, not shown, under its own power may be
7 driven up or down the plane formed by the loading ramp 10.

8 An alternative embodiment 10' is illustrated by Fig. 7
9 in the event it is desired to load a three wheel vehicle into
10 the pickup bed. A temporary track 28' (Fig. 8) is interposed
11 between the tracks 28 and 30 to supply a track for the single
12 front or rear wheel of a three wheel vehicle in negotiating
13 the ramp 10'. The temporary track 28' similarly comprises a
14 U-shaped frame member 32' and a companion U-shaped frame
15 member 34', each having their respective legs disposed in
16 confronting relation. The bight portion 44' of the U-shaped
17 member 32' is interposed between the tracks 28 and 30 adjacent
18 the tailgate top rail 18. The U-shaped member 32' is main-
19 tained in interposed relation between the tracks 28 and 30 by
20 pairs of flanges 60 and 62 secured in transverse opposition to
21 the legs of the U-shaped member 32' and overlap the adjacent
22 legs of the members 28 and 30. Similarly the other U-shaped
23 member 34' is provided with pairs of rigidly connected flanges
24 64 and 66 similarly overlapping the legs of the adjacent
25 tracks 28 and 30 to complete the configuration of the alterna-
26 tive embodiment 10'.

1 Obviously the invention is susceptible to changes or
2 alterations without defeating its practicability. Therefore,
3 I do not wish to be confined to the preferred embodiment(s)
4 shown in the drawing(s) and described herein.

5 I claim: